

II. Remarks

Reconsideration and allowance of the subject application are respectfully requested.

Claim 1-8 and 10-41 are pending in this application. Claims 1, 11, 22 and 32 are independent.

Claims 1-31 and 39 were rejected under 35 USC § 112, second paragraph, as being indefinite, for the reasons discussed on page two of the Office Action. Applicants respectfully traverse this rejection on the ground that the person of ordinary skill in the art would not be confused as to the meaning or scope of the claims. Nevertheless, these claims have been amended for clarity with respect to the specification and Drawings, and not in response to any statutory requirement.

Claims 1-41 stand rejected as being unpatentable over Kaas, Kurtz and Ebel, for the reasons discussed on pages 3-5 of the Office Action. Applicants respectfully traverse all art rejections.

Independent Claim 1 recites a novel combination of structure and/or function whereby a water treatment ultraviolet radiation sensor device for detecting ultraviolet radiation from a plurality of submerged ultraviolet radiation sources disposed in a predefined arc around the sensor device in a radiation field includes a radiation collector that is configured to (i) receive ultraviolet radiation from the plurality of submerged

ultraviolet radiation sources disposed in the predefined arc around the sensor device within the radiation field, and (ii) redirect the received radiation along a predefined pathway. Notably, the radiation collector has a polygonal cross-section. A sensor element is configured to detect and respond to radiation along the pathway. Kaas fails to disclose or suggest such structure including, at least the polygonal cross-section radiation collector

Each of independent Claims 1, 11, 22, and 32 recites a novel combination of structure and/or function whereby a water treatment ultraviolet sensor includes, *inter alia*, a radiation collector configured to (i) receive ultraviolet radiation from a predefined arc around the sensor device in the water to be treated, and (ii) redirect the received radiation along a predefined pathway. A sensor element is configured to detect and respond to the incident radiation redirected along the pathway.

While Kurtz discloses an ultraviolet sensor for fluid purification, it discloses no detail regarding any radiation collector, as the Examiner admits. The Office Action points to Ebel as disclosing a radiation collector in the integrating sphere 27. However, Ebel is directed to a contact lens sterilization system and has nothing to do with the field of water treatments systems - to which the subject claims are

directed. The Office Action provides no convincing motivation or suggestion (absent hindsight reconstruction) which would lead the person of ordinary skill in the water treatment field to search for art in the non-analogous contact lens sterilization field. The motivation set forth in the Office Action "to more effectively collect radiation from a large field of view and obtain improved detection" is so broad and generalized that it would permit combination of Kutz with any reference, regardless of the field. The patent laws are not so broad. Simply put, without convincing motivation which would permit the person of skill in the water treatment field to search for art in the contact lens sterilization field, the office Action has relied on impermissible hindsight reconstruction, and this rejection should be withdrawn.

To prevent such hindsight reconstruction, the law is clear that a *prima facie* case of obviousness can be established **only** by showing some **objective** teaching in the cited art which would lead an individual of ordinary skill in this art to combine the relevant references. See *Ex parte Levengood*, 28 USPQ2d 1300, 1302 (Patent Office Board of Appeals 1993). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined **only** if

there is some suggestion or incentive to do so. The mere fact that the prior art may be modified does not make the modification obvious unless the prior art suggested the desirability of the modification. See *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1578, 221 USPQ 929, 933 (Fed. Cir. 1984). It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. See *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991).

It is well established that, in order to sustain a rejection under 35 U.S.C. §103, it is the burden of the USPTO to establish a *prima facie* case of obviousness, *In re Reuter*, 651 F.2d 751, 210 USPQ 249 (CCPA 1981). In asserting such a case of obviousness, the Examiner must propose some modification of a particular reference or a combination thereof with another reference in order to arrive at the claimed invention. In this regard, the teachings of a single prior art reference or a primary prior art reference (which is combined with one or more secondary prior art references) must be sufficient to justify a conclusion that any proposed modification or combination of references is what one of ordinary skill in the art would have found obvious to do at the time the invention was made, *In re Linter*, 458 F.2d 1013, 173 U.S.P.Q. 560, 562 (CCPA 1972).

Moreover, the Courts have held that there must be some logical reason apparent from the evidence of record that would justify a modification or combination of prior art references, *In re Regel*, 188 USPQ 132 (CPPA 1975). If there is no such reason, the *prima facie* case of obviousness has not been made out, *Oscar Mayer Foods Corp. v. Sara Lee Corp.*, 15 USPQ (2d) 1204, (D.C. Wis., 1990).

Hindsight combination of references is not a valid basis for rejection under 35 U.S.C. §103, *In re Adams*, 148 U.S.P.Q. 742 (CPPA 1966) and *In re Skoll*, 187 U.S.P.Q. 481, 484 (CCPA 1975). Further, in *Twin Disc Inc. v. United States*, 10 Cl. Ct. 713; 231 USPQ 417, 425 (Cl. Ct. 1986), the Court stated:

... it is now clear beyond cavil that it is not permissible to ascertain factually what the inventors did and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct the claimed invention.

Citing *Orthopedic Equipment Co., Inc. v. United States*, 702 F.2d 1005, 1012; 217 USPQ 193, 199 (Fed. Cir. 1983), the Court in *Twin Disc* further stated that it is incorrect to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.

In view of the above, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3507. All correspondence should continue to be directed to our address given below.

Respectfully submitted,


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